These nanocomposites may be used in different areas such as environmentally safe products, biomedical applications, enzyme immobilization, textile sizing, adhesives, coating and paints.

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6. Appendix: List of Publications:

1. **S.Gandhi**, N.Nagalakshmi, I. Baskaran, V.Dhanalakahmi, M.R. Gopinathan Nair, R. Anbarasan, Synthesis and characterizations of nano sized NiO and its surface catalytic effect on poly(vinyl alcohol), *J. Appl. Polym*. Sci. 118 (2011) 1666-1674
2. **S.Gandhi,** R. Hari Hara Subramani, T. Ramakrishnan, A. Sivabalan, V.Dhanalakahmi, M.R. Gopinathan Nair, R. Anbarasan, Ultrasound assisted one pot synthesis of nano-sized CuO and its nanocomposite with poly(vinyl alcohol), *J. Mater. Sci*, 45(2010)1688-1694.
3. **S.Gandhi**, M.R. Gopinathan Nair, R. Anbarasan, Sonochemical synthasis and characterization of Nanostructued Mn_3O_4 and its surface catalytic effect on Poly (vinyl alcohol), *Int. J. Nanosci.* 11(2012)1250004
4. **S.Gandhi**, P. Abiramipriya, N. Pooja, J. Juliat latha Jeyakumari, A. Yelil Arasi, V.Dhanalakahmi, M.R. Gopinathan Nair, R. Anbarasan, Synthesis

and characterizations of nano sized MgO and its nano composite with poly(vinyl alcohol), *J. Non-Cryst. Solids* 357(2011)181-185.

5. **S.Gandhi,** R.Pandiarajaguru, R. Prabhu, V.Dhanalakahmi, A.Jayalakshmi, B.Dhanalakshmi, S.Ulfath nisha, R. Anbarasan, T. Jayalakshmi, Synthesis, characterizations and Mechanical properties of structurally modified poly(vinyl alcohol), *J. Appl. Polym. Sci.* 117(2010)2059-2068
6. **S.Gandhi**, M.R. Gopinathan Nair, R. Anbarasan, Ultrasound assisted one pot synthesis of nano-sized Co_3O_4 and its surface catalytic effect on Poly (vinyl alcohol), *Nano* (communicated)
7. **S.Gandhi**, M.R. Gopinathan Nair, R. Anbarasan, synthesis and characterization of CdO nanomaterias and its surface catalytic effect on Poly (vinyl alcohol), *J. Appl. Polym. Sci.* (communicated)